

## **ABSTRACT**

**Assembly for the manufacture of a hollow mechanical part by diffusion bonding and superplastic forming, use of such an assembly and process for manufacturing such a mechanical part**

The invention relates to an assembly for the manufacture of a hollow mechanical part by diffusion bonding and superplastic forming.

According to the invention, this assembly (10') comprises a stack (12') of at least two primary parts, the said primary parts being joined together around their periphery with the exception of a place forming a passage so as to define between the two of them a cavity, and the said primary parts having, facing the said cavity, at least one face that is covered, in a pattern, with a stop-off product containing a binder that can be thermally degraded, and a sealed reservoir (14) having an open end, the said end being joined in a sealed manner to the said passage in the said stack so as to allow communication between the said internal space of the said reservoir and the said cavity, the reservoir being placed under a partial vacuum, this being produced so as to be non-deformable at the temperature and at the pressure at which the diffusion bonding of the said stack takes place and having a volume such that, when the said stack is at the thermal degradation temperature of the said binder, the gases resulting from the degradation of the binder are sucked up into the reservoir.

Application to the manufacture of a hollow turbomachine blade.

Figure 2